

AMENDMENTS TO THE CLAIMS

CLAIMS 1-27 (CANCELED).

CLAIM 28 (NEW) A bicycle electrical control apparatus comprising:
a programmed power/control circuit that receives power from a power supply and outputs a composite signal having a power signal component and a control signal component, wherein the control signal component contains information such that the composite signal can be decoded to extract the information contained in the control signal component;
a first electrical bicycle component that receives the composite signal and is controlled by the information contained in the control signal component of the composite signal;
a second electrical bicycle component that receives the composite signal but is not controlled by the control signal component of the composite signal; and
a power stabilizing circuit that receives the composite signal, stabilizes power provided from the composite signal, and provides stabilized power to the second electrical bicycle component.

CLAIM 29 (NEW): The apparatus according to claim 28 wherein the power/control circuit comprises a CPU.

CLAIM 30 (NEW): The apparatus according to claim 28 wherein the control signal has a pulse component.

CLAIM 31 (NEW): The apparatus according to claim 30 wherein the control signal has an ON component and an OFF component.

CLAIM 32 (NEW): The apparatus according to claim 28 wherein the power stabilizing circuit comprises a capacitor.

CLAIM 33 (NEW): The apparatus according to claim 32 wherein the power stabilizing circuit further comprises a diode coupled to prevent reverse current from the second electrical bicycle component to the power/control circuit.

CLAIM 34 (NEW): The apparatus according to claim 28 wherein the power/control circuit is structured to derive the power signal component from an alternating current source.

CLAIM 35 (NEW): The apparatus according to claim 34 wherein the power/control circuit is structured to derive the power signal component from a dynamo hub mounted to one of a front wheel or a rear wheel of the bicycle.

CLAIM 36 (NEW): The apparatus according to claim 28 wherein the power/control circuit is structured to derive the power signal component from a direct current source.

CLAIM 37 (NEW): The apparatus according to claim 36 wherein the power/control circuit is structured to derive the power signal component from a battery.

CLAIM 38 (NEW): The apparatus according to claim 28 wherein the power stabilizing circuit stabilizes the power provided from the power signal component to the second electrical bicycle component but not to the first electrical bicycle component.

CLAIM 39 (NEW): The apparatus according to claim 28 wherein the control signal component comprises a speed indicating signal.

CLAIM 40 (NEW): The apparatus according to claim 39 wherein the power/control circuit includes a waveform shaping circuit that derives the speed indicating signal from the output of an alternating current generator.

CLAIM 41 (NEW): The apparatus according to claim 28 wherein the first electrical bicycle component comprises a liquid crystal display component structured to display various data, and wherein the second electrical bicycle component comprises a backlight that illuminates the liquid crystal display component.

CLAIM 42 (NEW): The apparatus according to claim 28 wherein the first electrical bicycle component comprises a gear shift driving component that drives a gear shift mechanism having a plurality of gear ratios.

CLAIM 43 (NEW): The apparatus according to claim 42 wherein the second electrical bicycle component comprises a light.

CLAIM 44 (NEW): The apparatus according to claim 28 wherein the power stabilizing circuit stabilizes a voltage provided to the second electrical bicycle component.

CLAIM 45 (NEW): The apparatus according to claim 44 wherein the power stabilizing circuit comprises a power storage device coupled in parallel with the second electrical bicycle component.

CLAIM 46 (NEW): The apparatus according to claim 45 wherein the power storage device comprises a capacitor.

CLAIM 47 (NEW): The apparatus according to claim 46 wherein the power stabilizing circuit further comprises a diode coupled to prevent reverse current from the capacitor to the power/control circuit.

CLAIM 48 (NEW): The apparatus according to claim 28 wherein the first electrical bicycle component comprises a CPU that receives the composite signal and is controlled by the control signal component of the composite signal.